



Bridge to Biotech City College of San Francisco

Learning Communities to Promote
Recruiting and Retaining Students



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History

- Biotech program at City College of San Francisco started in 1991.
- Steady increase in the number of classes and students:
 - **currently: 500 students, 33 classes**
- The program has successfully produced well-trained students and continues to place them in laboratory and manufacturing jobs throughout the Bay Area.



Biotech Program: Overview

- Target students
 - Adults
 - returning students with AA or BA
 - credit & non-credit ESL students
 - Displaced workers
 - High school students
 - Under-prepared students
- Biotech courses with real job component
- Well defined career lattice
- Impact on Community



Bridge to Biotech: Features

- One semester in length
- Provides necessary background to enter Biomanufacturing Certificate Program
- Targets adult students with **NO BIOLOGY** background and 8th grade Math and English skills.
- Integrated, Contextualized Curriculum, composed of three classes:
 - Research Skills for Biotech (BTEC 10)
 - Language of Biotechnology (ET 107)
 - Biotech Math (ET 108A)

Bridge to Biotech:

Increased Retention and Completion for Under-prepared students



Started in 2002, with VTEA grant and NSF-CCLI grant (\$500K)

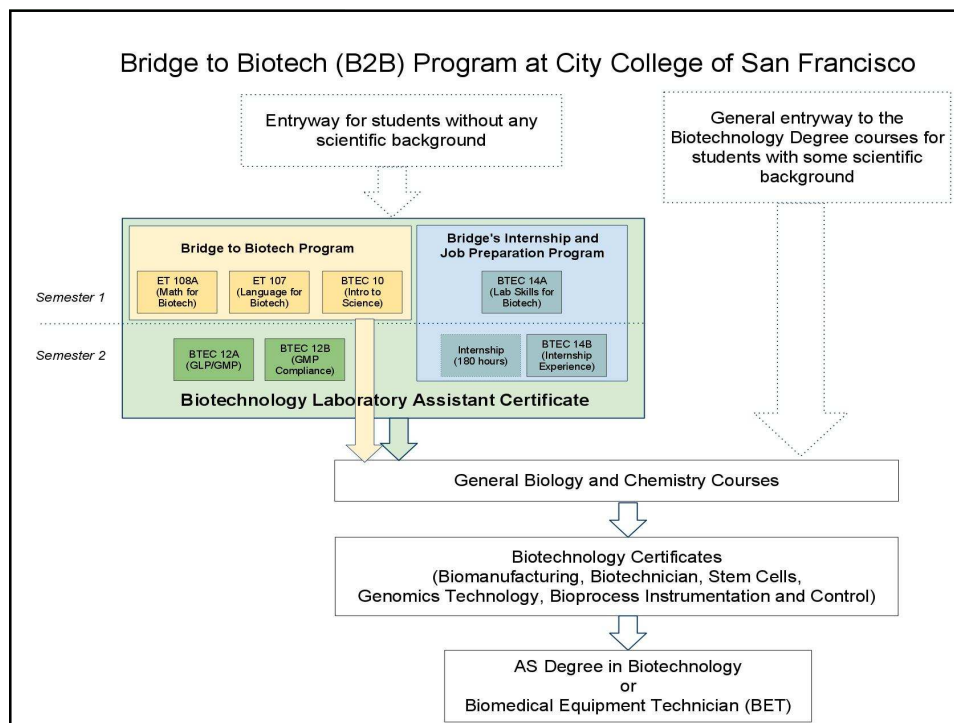
- On average 30-40 Students per semester
- 82% low Income or unemployed students
- Diversity: 18% African American, 33% Asian, 22% Hispanic
- Language: 42% ESL students

Targets adult students with no scientific background and 8-9th grade Math and English skills

- On average 82% of students complete the Bridge

Provides necessary background to enter Biotech programs at CCSF

- On average, 83% of students enroll in Biotech Program upon completion of Bridge





Bridge to Biotech:

Increased job placement for under-served students

Bridge's Internship and Job Preparation Program (BIJP) started in 2004, with Bay Area Workforce Funding Collaborative grant

Offers:

- internship and job preparation,
 - internship and job placement assistance,
 - monitoring and support during the internship
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- Approximately 25-35 Students per semester
 - Approximately, 75% of Bridge students enroll in BTEC 14A the same semester.
 - Approximately 75% of students who begin the BIJP program go into an Internship
 - On average, 40% employed in biotech industry within a year of completion of the internship (Lab Assistant or Lab Technician)



Bridge to Biotech:

Increased job placement for under-served students

2-semester program :

Semester 1: Basic Biotech Lab Skills class (BTEC 14A) to prepare for the internship (Optional: can be taken during the Bridge, or after.)

- In Spring 2010, 17% of BTEC 14A students were past Bridge students.

Semester 2:

- 180-hour research internship in Bay Area laboratories as Lab Assistant and Lab Technicians.
- Biotech Internship Experience class (BTEC 14B) to support during the internship and prepare for a job
- Possibility of getting 3 extra units of credits for internship experience itself (BTEC 93)



Bridge to Biotech:

Dissemination to other colleges

Bio-Link, a National ATE Center of Excellence for Biotechnology, has received a grant from NSF through the SYNERGY project to disseminate the Bridge to Biotech program to colleges around the U.S.

Bio-Link is expecting to start implementing Bridge programs in other colleges in June 2010.

TEAM

- Phil Jardim, Biotech Program Coordinator
- Edie Kaeuper, Biomanufacturing Coordinator & Bridge Science Instructor
- Carin Zimmerman, Stem Cell Coordinator Bridge Science Instructor
- James Lewis, Bridge Coordinator
- Rob Yung, Bridge Language Instructor
- Rob Reed, Bridge Math Instructor
- Frances Grau Brull, Internship Coordinator
- Elaine Johnson, Bio-Link Director
- John Carrese, Synergy Program Innovation Coach
- Laurence Clement, Synergy Program Coordinator & Internship Instructor